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=> d his nofil

     (FILE 'HOME' ENTERED AT 13:12:10 ON 27 APR 2006)

     FILE 'HCAPLUS' ENTERED AT 13:12:21 ON 27 APR 2006
                E US2004-511554/APPS
                E WO2003-EP02739/APPS
                E WO2003-EP2739/APPS
L1            1 SEA ABB=ON  PLU=ON  (WO2003-EP2739/AP OR WO2003-EP2739/PRN)
                E DE2002-216998/APPS
                E DE2002-10216998/APPS
L2            1 SEA ABB=ON  PLU=ON  (DE2002-10216998/AP OR DE2002-10216998/PRN)

L3            1 SEA ABB=ON  PLU=ON  L1 OR L2
                SEL RN

     FILE 'REGISTRY' ENTERED AT 13:13:51 ON 27 APR 2006
L4           16 SEA ABB=ON  PLU=ON  (115421-80-2/BI OR 119-61-9/BI OR 121-43-7/
                BI OR 166982-32-7/BI OR 166982-33-8/BI OR 16940-66-2/BI OR
                337-33-7/BI OR 476639-90-4/BI OR 615286-36-7/BI OR 615286-37-8/
                BI OR 616-38-6/BI OR 617-86-7/BI OR 91543-32-7/BI OR 91543-33-8
                /BI OR 91543-34-9/BI OR 998-29-8/BI)

     FILE 'HCAPLUS' ENTERED AT 13:13:56 ON 27 APR 2006
L5            1 SEA ABB=ON  PLU=ON  L3 AND L4
                D IALL HITSTR

     FILE 'REGISTRY' ENTERED AT 13:46:29 ON 27 APR 2006
L6              STR
L7            4 SEA SSS SAM L6
L8           87 SEA SSS FUL L6
                D QUE
L9              STR
L10           6 SEA SSS SAM L9
L11         304 SEA SSS FUL L9
L12         235 SEA ABB=ON  PLU=ON  L11/COM OR (L11 AND ?PHOSPHIN?)
L13         183 SEA ABB=ON  PLU=ON  L11/COM
L14         230 SEA ABB=ON  PLU=ON  L11 AND PHOSPHIN?
L15       16636 SEA ABB=ON  PLU=ON  L13 OR 114

     FILE 'HCAPLUS' ENTERED AT 13:54:49 ON 27 APR 2006
L16         125 SEA ABB=ON  PLU=ON  L8
L17         310 SEA ABB=ON  PLU=ON  L13
L18          30 SEA ABB=ON  PLU=ON  L16 AND L17
L19          50 SEA ABB=ON  PLU=ON  L16(L)RACT+ALL/RL
L20          84 SEA ABB=ON  PLU=ON  L13(L)PREP+ALL/RL
L21           4 SEA ABB=ON  PLU=ON  L19 AND L20
L22           1 SEA ABB=ON  PLU=ON  L21 AND L3

     FILE 'REGISTRY' ENTERED AT 13:56:21 ON 27 APR 2006
                SEL RN L8
                DEL SEL Y
                SEL RN L8
                SEL RN L13

     FILE 'CASREACT' ENTERED AT 13:57:07 ON 27 APR 2006
L23          13 SEA ABB=ON  PLU=ON  (1112-04-5/RRT OR 1112-16-9/RRT OR
                111784-57-7/RRT OR 111784-62-4/RRT OR 115421-80-2/RRT OR
                115421-81-3/RRT OR 115421-82-4/RRT OR 1184-81-2/RRT OR
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                1184-82-3/RRT OR 1184-96-9/RRT OR 119254-99-8/RRT OR 119255-00-
                4/RRT OR 119255-02-6/RRT OR 119280-20-5/RRT OR 123271-20-5/RRT
                OR 125685-67-8/RRT OR 127223-44-3/RRT OR 1426-40-0/RRT OR
                166982-30-5/RRT OR 166982-31-6/RRT OR 1840-67-1/RRT OR
                19585-44-5/RRT OR 205926-47-2/RRT OR 205926-48-3/RRT OR
                205926-49-4/RRT OR 205926-51-8/RRT OR 205926-52-9/RRT OR
                21220-15-5/RRT OR 21491-87-2/RRT OR 22737-41-3/RRT OR 22779-53-
                9/RRT OR 22779-54-0/RRT OR 23092-10-6/RRT OR 2377-98-2/RRT OR
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                270921-57-8/RRT OR 270921-58-9/RRT OR 270921-59-0/RRT OR
                27900-96-5/RRT OR 27900-97-6/RRT OR 27900-98-7/RRT OR 356040-09
                -0/RRT OR 44863-52-7/RRT OR 454421-26-2/RRT OR 454468-19-0/RRT
                OR 51275-75-3/RRT OR 51275-76-4/RRT OR 51348-78-8/RRT OR
                51703-85-6/RRT OR 53432-53-4/RRT OR 53432-54-5/RRT OR 58734-89-
                7/RRT OR 58772-67-1/RRT OR 59239-81-5/RRT OR 60094-21-5/RRT OR
                60094-22-6/RRT OR 650609-70-4/RRT OR 661-45-0/RRT OR 685-72-3/R
                RT OR 692717-46-7/RRT OR 705916-18-3/RRT OR 738550-01-1/RRT OR
                741663-66-1/RRT OR 759-07-9/RRT OR 762180-58-5/RRT OR 79549-38-
                5/RRT OR 79549-39-6/RRT OR 79549-40-9/RRT OR 79549-41-0/RRT OR
                827027-06-5/RRT OR 856828-41-6/RRT OR 856952-67-5/RRT OR
                91543-32-7/RRT OR 91543-33-8/RRT OR 91543-34-9/RRT OR 91543-35-
                0/RRT OR 91543-36-1/RRT OR 91543-37-2/RRT OR 91543-38-3/RRT OR
                91543-39-4/RRT OR 99564-97-3/RRT OR 99565-01-2/RRT)
                D COST

     FILE 'HCAPLUS' ENTERED AT 13:58:03 ON 27 APR 2006
                E PHOSPHORANE/CT
                E E7+ALL
L24               5 SEA ABB=ON  PLU=ON  PHOSPHORANES+PFT/CT(L)PERFLUORO?
L*** DEL          1 S L3 AND L24
L25             185 SEA ABB=ON  PLU=ON  PHOSPHORANES+PFT/CT(L)RACT+ALL/RL
L26               3 SEA ABB=ON  PLU=ON  L24 AND L25
                E PHOSPHINES/CT
                E E3+ALL
L27              24 SEA ABB=ON  PLU=ON  PHOSPHINES+PFT/CT(L)PERFLUOR?
L28            1438 SEA ABB=ON  PLU=ON  PHOSPHINES+PFT/CT(L)PREP+ALL/RL
L29              18 SEA ABB=ON  PLU=ON  L27 AND L28
L30               1 SEA ABB=ON  PLU=ON  L26 AND L29
L31               1 SEA ABB=ON  PLU=ON  L3 AND L30
L32               4 SEA ABB=ON  PLU=ON  L30 OR L21

=> d que stat
L6                STR
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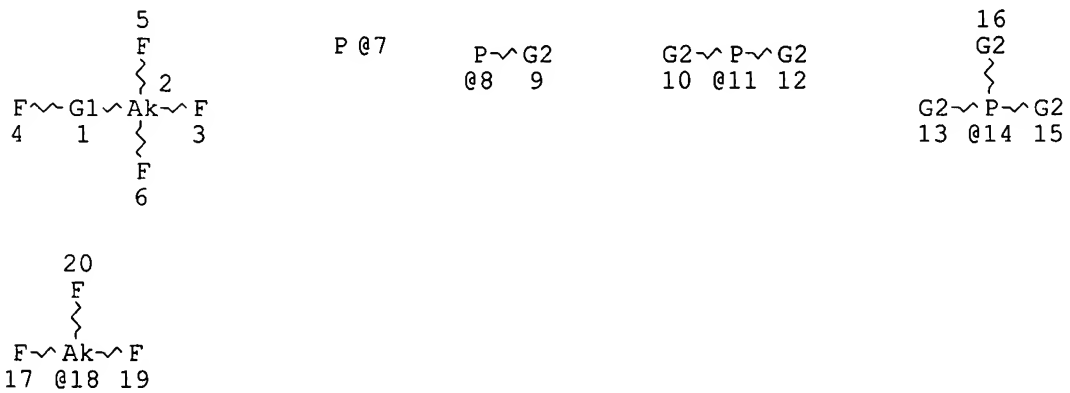
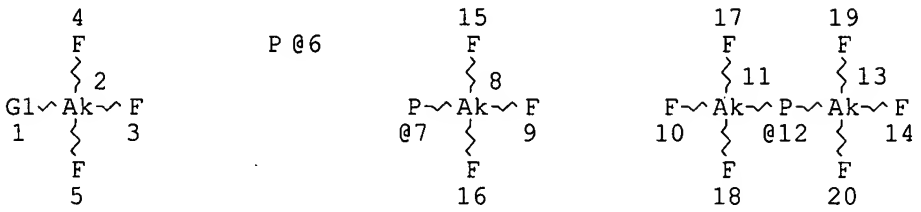


VAR G1=7/8/11/14
VAR G2=F/18
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 7
CONNECT IS E3 RC AT 8
CONNECT IS E4 RC AT 11
CONNECT IS E5 RC AT 14
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE
L8 87 SEA FILE=REGISTRY SSS FUL L6
L9 STR



VAR G1=6/7/12
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 6
CONNECT IS E2 RC AT 7
CONNECT IS E3 RC AT 12
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE
L11 304 SEA FILE=REGISTRY SSS FUL L9
L13 183 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM
L16 125 SEA FILE=HCAPLUS ABB=ON PLU=ON L8
L19 50 SEA FILE=HCAPLUS ABB=ON PLU=ON L16(L)RACT+ALL/RL
L20 84 SEA FILE=HCAPLUS ABB=ON PLU=ON L13(L)PREP+ALL/RL
L21 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 AND L20
L24 5 SEA FILE=HCAPLUS ABB=ON PLU=ON PHOSPHORANES+PFT/CT(L)PERFLUOR O?
L25 185 SEA FILE=HCAPLUS ABB=ON PLU=ON PHOSPHORANES+PFT/CT(L)RACT+ALL /RL
L26 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND L25
L27 24 SEA FILE=HCAPLUS ABB=ON PLU=ON PHOSPHINES+PFT/CT(L)PERFLUOR?
L28 1438 SEA FILE=HCAPLUS ABB=ON PLU=ON PHOSPHINES+PFT/CT(L)PREP+ALL/R L
L29 18 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 AND L28
L30 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L29
L32 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 OR L21

=> d l32 ibib abs hitind hitstr 1-4

L32 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:837099 HCAPLUS
DOCUMENT NUMBER: 139:323661
TITLE: Process for the production of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and their use as perfluoroalkylating reagents
INVENTOR(S): Welz-Biermann, Urs; Ignatyev, Nikolai; Weiden, Michael; Schmidt, Michael; Heider, Udo; Miller, Alexej; Willner, Helge; Sartori, Peter
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087113	A1	20031023	WO 2003-EP2739	20030317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10216998	A1	20031113	DE 2002-10216998	20020418
AU 2003218773	A1	20031027	AU 2003-218773	20030317
EP 1495037	A1	20050112	EP 2003-712029	20030317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005131256	A1	20050616	US 2003-511554	20030317
JP 2005522512	T2	20050728	JP 2003-584069	20030317
PRIORITY APPLN. INFO.:			DE 2002-10216998 A	20020418
			WO 2003-EP2739 W	20030317

OTHER SOURCE(S): CASREACT 139:323661; MARPAT 139:323661
AB (perfluoroalkyl)phosphines were prepared by solventless reaction at reflux of at least 1 fluoro(perfluoroalkyl)phosphorane (CnF2n+1)mPF5-m (1≤n≤8, preferably 1≤n≤4; m = 1, 2, 3) with equimolar or excess amts. of at least 1 hydride ion donor (hydride donors = hydrosilanes, alkyl(hydro)silanes, metal hydrides, borohydrides, hydroborates); tris(perfluoroalkyl)phosphines thus prepared are useful for perfluoroalkylation of chemical substrates, preferably tricoordinated organoboron compds. and/or carbonyl group-containing organic compds., in presence of a base. In an example, treating 0.54 mol (C2F5)3PF2 with 1.089 mol NaBH4 at reflux for 3 h with vigorous stirring gave 93% (C2F5)3P, which subsequently was treated with KOBu-t and benzophenone in THF to give 62% CF3CF2C(OH)Ph2.
IC ICM C07F009-50
CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 21

IT **Phosphoranes**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(**perfluoroalkyl**; process for preparation of (**perfluoroalkyl**)phosphines by reaction of fluoro(**perfluoroalkyl**)phosphoranes with hydride donors and subsequent use as **perfluoroalkylation** reagents)

IT **Phosphines**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(**perfluoroalkyl**; process for preparation of (**perfluoroalkyl**)phosphines by reaction of fluoro(**perfluoroalkyl**)phosphoranes with hydride donors and subsequent use as **perfluoroalkylation** reagents)

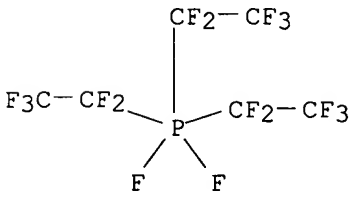
IT 119-61-9, Benzophenone, reactions 121-43-7, Trimethyl borate 616-38-6, Dimethyl carbonate **91543-32-7**, Difluorotris(pentafluoroethyl)phosphorane **91543-33-8**, Difluorotris(n-heptafluoropropyl)phosphorane **91543-34-9**, Difluorotris(n-nonafluorobutyl)phosphorane **115421-80-2**, Trifluorobis(n-nonafluorobutyl)phosphorane
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(process for preparation of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and subsequent use as perfluoroalkylation reagents)

IT **166982-32-7P**, Tris(pentafluoroethyl)phosphine 476639-90-4P, Potassium (pentafluoroethyl)trifluoroborate
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(process for preparation of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and subsequent use as perfluoroalkylation reagents)

IT 337-33-7P, 2,2,3,3,3-Pentafluoro-1,1-diphenylpropan-1-ol **166982-33-8P**, Tris(n-nonafluorobutyl)phosphine **615286-36-7P**, Bis(n-nonafluorobutyl)phosphine 615286-37-8P
RL: **SPN (Synthetic preparation)**; **PREP (Preparation)**
(process for preparation of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and subsequent use as perfluoroalkylation reagents)

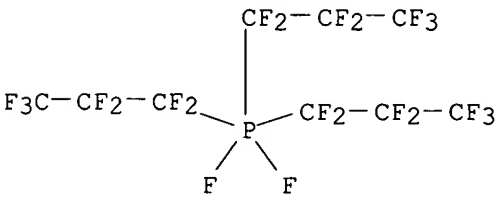
IT **91543-32-7**, Difluorotris(pentafluoroethyl)phosphorane **91543-33-8**, Difluorotris(n-heptafluoropropyl)phosphorane **91543-34-9**, Difluorotris(n-nonafluorobutyl)phosphorane **115421-80-2**, Trifluorobis(n-nonafluorobutyl)phosphorane
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(process for preparation of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and subsequent use as perfluoroalkylation reagents)

RN 91543-32-7 HCAPLUS
CN Phosphorane, difluorotris(pentafluoroethyl)- (9CI) (CA INDEX NAME)

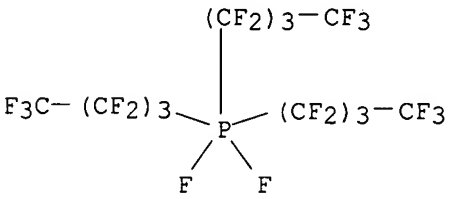


RN 91543-33-8 HCAPLUS

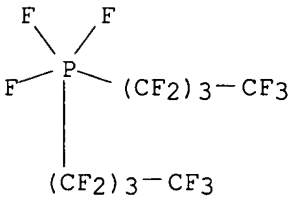
CN Phosphorane, difluorotris(heptafluoropropyl)- (9CI) (CA INDEX NAME)



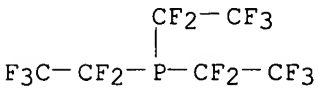
RN 91543-34-9 HCAPLUS
CN Phosphorane, difluorotris(nonafluorobutyl)- (9CI) (CA INDEX NAME)



RN 115421-80-2 HCAPLUS
CN Phosphorane, trifluorobis(nonafluorobutyl)- (9CI) (CA INDEX NAME)

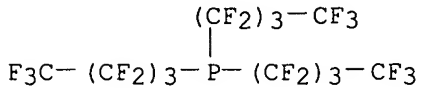


IT **166982-32-7P**, Tris(pentafluoroethyl)phosphine
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(process for preparation of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and subsequent use as perfluoroalkylation reagents)
RN 166982-32-7 HCAPLUS
CN Phosphine, tris(pentafluoroethyl)- (9CI) (CA INDEX NAME)

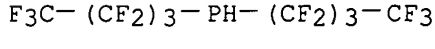


IT **166982-33-8P**, Tris(n-nonafluorobutyl)phosphine
615286-36-7P, Bis(n-nonafluorobutyl)phosphine
RL: **SPN (Synthetic preparation)**; **PREP (Preparation)**
(process for preparation of (perfluoroalkyl)phosphines by reaction of fluoro(perfluoroalkyl)phosphoranes with hydride donors and subsequent use as perfluoroalkylation reagents)

RN 166982-33-8 HCAPLUS
CN Phosphine, tris(nonafluorobutyl)- (9CI) (CA INDEX NAME)



RN 615286-36-7 HCAPLUS
CN Phosphine, bis(nonafluorobutyl)- (9CI) (CA INDEX NAME)

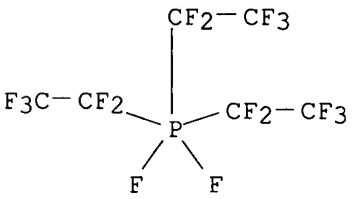


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

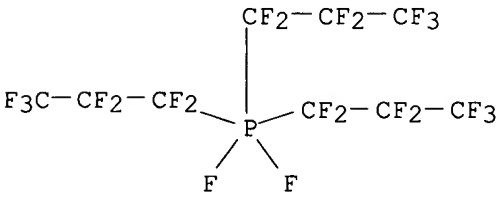
L32 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:653663 HCAPLUS
DOCUMENT NUMBER: 123:144016
TITLE: The synthesis of tris(perfluoroalkyl)phosphanes
AUTHOR(S): Kampa, Joel J.; Nail, John W.; Lagow, Richard J.
CORPORATE SOURCE: Dep. Chemistry, Univ. Texas Austin, Austin, TX, 78712, USA
SOURCE: Angewandte Chemie, International Edition in English (1995), 34(11), 1241-44
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Trialkylphosphines have been subjected to direct elemental fluorination in Freon 11 and 113 (1:1) in a solution reactor to produce difluorotris(perfluoroalkyl)phosphoranes, e.g., F2P(CF2CF3)3, in good yields. Reduction of the above difluorotris(perfluoroalkyl)phosphoranes by selective removal of the two axial fluorines atoms bound to the phosphorus using P(SiMe3)3 as reducing reagent gave previously inaccessible (perfluoroalkyl)phosphines, e.g., P(CF2CF3)3.
CC 29-7 (Organometallic and Organometalloidal Compounds)
IT **91543-32-7P**, Phosphorane, difluorotris(pentafluoroethyl)
91543-33-8P, Phosphorane, difluorotris(heptafluoropropyl)
91543-34-9P, Phosphorane, difluorotris(nonafluorobutyl)
91543-35-0P, Phosphorane, difluorotris(undecafluoropentyl)
91543-37-2P, Phosphorane, difluorotris(tridecafluorohexyl)
166982-30-5P 166982-31-6P
RL: PRP (Properties); **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(synthesis of tris(perfluoroalkyl)phosphines from selective reduction of difluorotris(perfluoroalkyl)phosphoranes, prepared by fluorination of trialkylphosphines)
IT **51761-69-4P 166982-32-7P 166982-33-8P**
166982-34-9P 166982-35-0P 166982-36-1P
166982-37-2P
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(synthesis of tris(perfluoroalkyl)phosphines from selective reduction of difluorotris(perfluoroalkyl)phosphoranes, prepared by fluorination of trialkylphosphines)

IT **91543-32-7P**, Phosphorane, difluorotris(pentafluoroethyl)
91543-33-8P, Phosphorane, difluorotris(heptafluoropropyl)
91543-34-9P, Phosphorane, difluorotris(nonafluorobutyl)
91543-35-0P, Phosphorane, difluorotris(undecafluoropentyl)
91543-37-2P, Phosphorane, difluorotris(tridecafluorohexyl)
166982-30-5P 166982-31-6P
RL: PRP (Properties); **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(synthesis of tris(perfluoroalkyl)phosphines from selective reduction of difluorotris(perfluoroalkyl)phosphoranes, prepared by fluorination of trialkylphosphines)

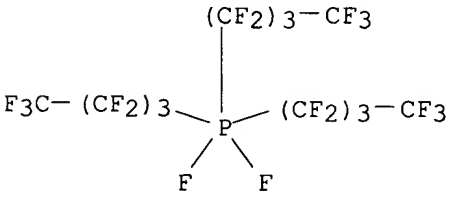
RN 91543-32-7 HCAPLUS
CN Phosphorane, difluorotris(pentafluoroethyl)- (9CI) (CA INDEX NAME)



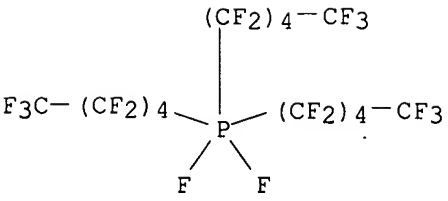
RN 91543-33-8 HCAPLUS
CN Phosphorane, difluorotris(heptafluoropropyl)- (9CI) (CA INDEX NAME)



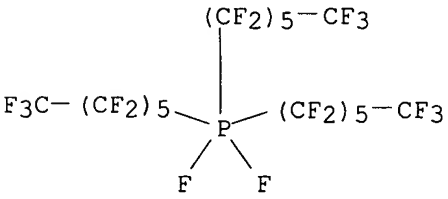
RN 91543-34-9 HCAPLUS
CN Phosphorane, difluorotris(nonafluorobutyl)- (9CI) (CA INDEX NAME)



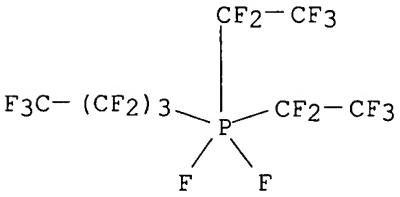
RN 91543-35-0 HCAPLUS
CN Phosphorane, difluorotris(undecafluoropentyl)- (9CI) (CA INDEX NAME)



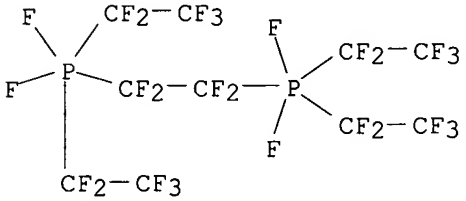
RN 91543-37-2 HCAPLUS
CN Phosphorane, difluorotris(tridecafluorohexyl)- (9CI) (CA INDEX NAME)



RN 166982-30-5 HCAPLUS
CN Phosphorane, difluoro(nonafluorobutyl)bis(pentafluoroethyl)- (9CI) (CA INDEX NAME)

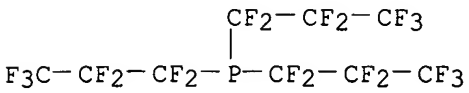


RN 166982-31-6 HCAPLUS
CN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(pentafluoroethyl)-, stereoisomer (9CI) (CA INDEX NAME)

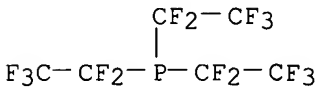


IT **51761-69-4P 166982-32-7P 166982-33-8P**
166982-34-9P 166982-35-0P 166982-36-1P
166982-37-2P
RL: PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**
(synthesis of tris(perfluoroalkyl)phosphines from selective reduction of difluorotris(perfluoroalkyl)phosphoranes, prepared by fluorination of trialkylphosphines)
RN 51761-69-4 HCAPLUS

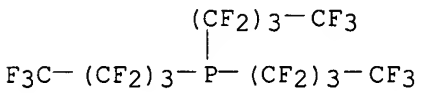
CN Phosphine, tris(heptafluoropropyl)- (9CI) (CA INDEX NAME)



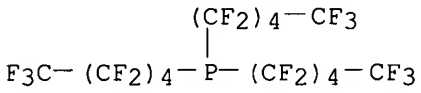
RN 166982-32-7 HCAPLUS
CN Phosphine, tris(pentafluoroethyl)- (9CI) (CA INDEX NAME)



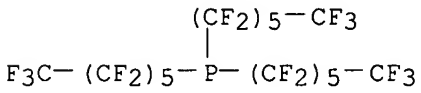
RN 166982-33-8 HCAPLUS
CN Phosphine, tris(nonafluorobutyl)- (9CI) (CA INDEX NAME)



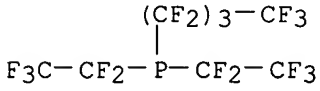
RN 166982-34-9 HCAPLUS
CN Phosphine, tris(undecafluoropentyl)- (9CI) (CA INDEX NAME)



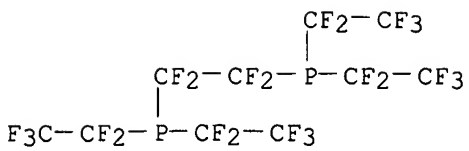
RN 166982-35-0 HCAPLUS
CN Phosphine, tris(tridecafluorohexyl)- (9CI) (CA INDEX NAME)



RN 166982-36-1 HCAPLUS
CN Phosphine, (nonafluorobutyl)bis(pentafluoroethyl)- (9CI) (CA INDEX NAME)



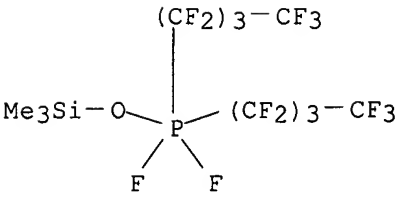
RN 166982-37-2 HCAPLUS
CN Phosphine, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[bis(pentafluoroethyl)-
(9CI) (CA INDEX NAME)



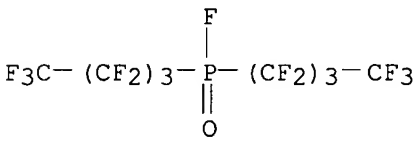
L32 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:493187 HCAPLUS
DOCUMENT NUMBER: 109:93187
TITLE: Comparative study of tris(trifluoromethyl)phosphine oxide, tris(nonafluorobutyl)phosphine oxide and fluorobis(nonafluorobutyl)phosphine oxide with ammonia and amines
AUTHOR(S): Mahmood, Tariq; Bao, Jian Ming; Kirchmeier, Robert L.; Shreeve, Jean'ne M.
CORPORATE SOURCE: Dep. Chem., Univ. Idaho, Moscow, ID, 83843, USA
SOURCE: Inorganic Chemistry (1988), 27(17), 2913-16
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:93187

AB Under identical reaction conditions, the behavior of R3PO (R = CF3, C4F9) or R2P(O)F (R = C4F9) with ammonia or amines is different, e.g., (CF3)3PO with NH3, MeNH2, or Me2NH gives (CF3)3P(NH2)2, (CF3)2P(O)(NHMe) or (CF3)P(O)(NHMe)2 (excess MeNH2), or (CF3)2P(O)NMe2, resp. However, with the same reactants, (C4F9)3PO forms (C4F9)2P(O)NH- NH4+ or C4F9P(O)(NH2)2 (excess NH3), C4F9P(O)(NHMe)2 (excess MeNH2), or (C4F9)3P(OH)[NMe2], (C4F9)3P[NMe2]2, and (C4F9)2P(O)NMe2. Similar products are found with (C4F9)2P(O)F except with Me2NH where (C4F9)PF(O)[NMe2] is the major product. In addition, new routes to (C4F9)3PO, (C4F9)2PF3, and (C4F9)2P(O)F are described. These products and conditions are compared with those for analogous hydrolysis reactions.

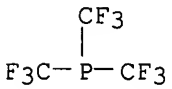
CC 29-7 (Organometallic and Organometalloidal Compounds)
IT **115421-81-3P**
RL: **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(formation and decomposition of)
IT 423-01-8P, Tris(trifluoromethyl)phosphine oxide **115421-82-4P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and amination of)
IT **432-04-2P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and oxidation of, with nitrogen dioxide)
IT **91543-34-9**
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(reaction of, with bis(trimethylsilyl) ether)
IT **115421-81-3P**
RL: **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(formation and decomposition of)
RN 115421-81-3 HCAPLUS
CN Phosphorane, difluorobis(nonafluorobutyl)[(trimethylsilyl)oxy]- (9CI) (CA INDEX NAME)



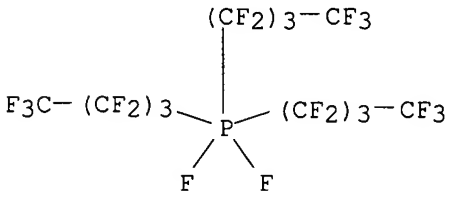
IT **115421-82-4P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and amination of)
RN 115421-82-4 HCAPLUS
CN Phosphinic fluoride, bis(nonafluorobutyl)- (9CI) (CA INDEX NAME)



IT **432-04-2P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and oxidation of, with nitrogen dioxide)
RN 432-04-2 HCAPLUS
CN Phosphine, tris(trifluoromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **91543-34-9**
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(reaction of, with bis(trimethylsilyl) ether)
RN 91543-34-9 HCAPLUS
CN Phosphorane, difluorotris(nonafluorobutyl)- (9CI) (CA INDEX NAME)



L32 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1974:83141 HCAPLUS
DOCUMENT NUMBER: 80:83141
TITLE: Preparation and nuclear magnetic resonance parameters of perfluoroalkyl-substituted phosphorus(V) hydrides

AUTHOR(S): Gilje, John W.; Braun, Ronald W.; Cowley, Alan H.
CORPORATE SOURCE: Dep. Chem., Univ. Tex., Austin, TX, USA
SOURCE: Journal of the Chemical Society, Chemical Communications (1973), (21), 813-14
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English

AB (CF3)3PH2 (I), CF3PF3H (II) and (CF3)2PF2H were prepared by vapor phase reaction of (CF3)nPF5-n (n = 3, 1, 2, resp.) with Me3SiH. The labile CF3PF2H2 was detected in the reversible liquid phase reaction of CF3PF4 with Me3SiH but not isolated. I and II are fluxional.

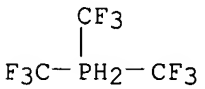
CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 51275-75-3P 51275-76-4P **51348-77-7P** 51348-78-8P
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(preparation and NMR parameters of)

IT **661-45-0 1184-81-2 1184-82-3**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reaction with trimethylsilane)

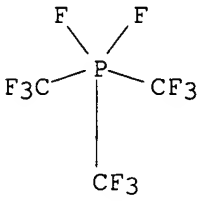
IT **51348-77-7P**
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(preparation and NMR parameters of)

RN 51348-77-7 HCAPLUS
CN Phosphorane, tris(trifluoromethyl)-, (TB-5-11)- (9CI) (CA INDEX NAME)

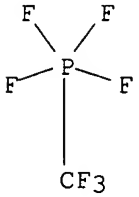


IT **661-45-0 1184-81-2 1184-82-3**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reaction with trimethylsilane)

RN 661-45-0 HCAPLUS
CN Phosphorane, difluorotris(trifluoromethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1184-81-2 HCAPLUS
CN Phosphorane, tetrafluoro(trifluoromethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1184-82-3 HCAPLUS
CN Phosphorane, trifluorobis(trifluoromethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)